



The OHIO ACADEMY of SCIENCE
1500 West Third Avenue • Suite 228
Columbus OH 43212-2817
614/488-2228 • oas@iwaynet.net
<http://www.ohiosci.org>



Contact:

Dr. Lynn E. Elfner
(The Ohio Academy of Science—614.488.2228),
Mr. John Klipfell
(Entrepreneurial Engagement Ohio—440-821-2357)
or Johnathan Holifield, Esq.
(NorTech—216.363.6883)

OHIO MUST BEGIN TO GROW ITS OWN ENTREPRENEURS

The next generation of technological innovation will come from today's students.

“Believe in Ohio - A STEM Bridge to Ohio's Innovation Economy of the Future”

Advance for release January 23

(Cincinnati, OH, January 23, 2013). Ohio must begin to grow its own entrepreneurs. That's the message the Ohio Board of Regents heard today from The Ohio Academy of Science, Entrepreneurial Engagement Ohio, NorTech and a team of noted *STEM advocates who have developed a pragmatic, grassroots plan that offers Ohio's high school students a “STEM Bridge to Ohio's Innovation Economy of the Future.”

Entitled “Believe in Ohio—A STEM Bridge to Ohio's Innovation Economy of the Future”, the proposed program will develop a statewide youth entrepreneurial STEM ecosystem to support the developing innovation economy of the State of Ohio.

As espoused by the plan, STEM is a bridge to our future economic prosperity. Entrepreneurship and STEM commercialization coupled with the bedrock foundations of science, math, engineering and technology will continue and extend Ohio's economic prosperity.

The June 25, 2012 *Condition of Higher Education Report* by the Ohio Board of Regents stated, “The next generation of technology innovation will come from today's student who should be exposed to an entrepreneurial curriculum, provided with real life experiences and supported in promoting their intellectual property ideas.”

“Ohio's youth who master and apply STEM subjects are the wellspring of prosperity,” said Dr. Lynn E. Elfner, Ohio Academy of Science CEO.

-MORE-

OHIO MUST BEGIN TO GROW ITS OWN ENTREPRENEURS—PAGE 2
DATE: JANUARY 23, 2013

“While the development of a growing entrepreneurial ecosystem in Ohio in recent years offers hope for a brighter future for Ohio’s innovation economy, great challenges remain,” said Dr. Julian Earls, President, Entrepreneurial Engagement Ohio.

John Klipfell, Executive Director, Entrepreneurial Engagement Ohio, remarked, “The innovation economy feeds on ideas pursued by young minds. Ohio’s economic development will stagnate without a constant flow of new ideas from our youth,” he remarked. “Or worse yet, our best and brightest minds will continue their exodus from Ohio,” he regretted.

“This potential game-changer for Ohio is an economic competitiveness imperative. Ohio must cultivate a larger and more inclusive STEM pipeline to produce more entrepreneurs. This program will accelerate those efforts,” said Johnathan Holifield, Nortech’s Vice President of Inclusive Competitiveness.

The Regents’ report added, “Ohio’s Higher Education Institutions should establish a statewide goal to increase the pipeline of STEM graduates over the next ten years and should (work) directly with Pre K-12 systems to increase the pipeline of (high school students) who are qualified in the STEM disciplines”.

The Regents’ report also noted, “Ohio should promote business plan competitions with meaningful preparation, awards and follow-up benefits....” The report also recommended, “Ohio should offer competitive full and partial tuition ‘Entrepreneurship Scholarships’ for promising students who plan to study and engage in entrepreneurship, akin to athletic scholarships.”

The “Believe in Ohio – A STEM Bridge to the Future” proposal to develop a youth entrepreneurial STEM ecosystem in support of the Innovation Economy of Ohio is timely and cost effectively addresses the Regents’ recommendations.

-MORE-

OHIO MUST BEGIN TO GROW ITS OWN ENTREPRENEURS—PAGE 3
DATE: JANUARY 23, 2013

The “Believe in Ohio – A STEM Bridge to the Ohio’s Innovation Economy of the Future” proposal includes the following four initiatives:

- 1. Introduce Ohio’s students to Ohio’s Entrepreneurial STEM Research & Development Community** by conducting a series of regional STEM Entrepreneurship Forums which will: 1) Introduce students to the world of STEM research and development and entrepreneurship in their region, and 2) Inspire students to begin to “think outside the box” in terms of applying what they are learning to create the products, services and solutions of the future.
- 2. Introduce Ohio’s students to Ohio’s growing Entrepreneurial Ecosystem** by developing a series of regional online courses that will “Introduce students (and the larger community) to the Innovation Economy” of their region. These courses will provide students, teachers and instructors, both at the high school and collegiate levels, with the information and content needed to develop STEM entrepreneurship courses at both the high school and college level. STEM Entrepreneurship courses at both levels should teach students about the entrepreneurial ecosystem in their region as well as include an entrepreneurial STEM experiential learning project.
- 3. Create a statewide entrepreneurial STEM mentoring network and teacher support program for high school students and their teachers that will directly connect students with real world mentors.**
 - 1) Create a statewide network of part-time “STEM Advocates” tied to the 11 state and 4 private higher education institutions that comprise the State Science Day District network and to Ohio’s eight urban school districts. These Advocates, administered by the Ohio Academy of Science, will find, recruit, train and encourage high school teachers and students to participate in an Ohio STEM Commercialization Plan competition, and in conjunction with the Ohio Academy of Science help match interested students with real world STEM mentors.
 - 2) A leadership team including Dr. Julian Earls, Mr. Johnathan Holifield and Dr. Michelle Spain will take a personal role in galvanizing the support of the African-American, Latino, rural and underserved communities in support of this initiative to ensure these communities are not left behind.
- 4. Create a statewide STEM Commercialization Plan Competition (within the framework of the existing State Science Day competition) exclusively for Ohio 10th, 11th and 12th graders and focused specifically on the entrepreneurial, practical application of STEM to invent the new products and services and solutions of future.** Incentivize students to participate in the competition and continue their educations in Ohio by awarding “Choose Ohio First” scholarships and other awards to top competition winners.

-MORE-

OHIO MUST BEGIN TO GROW ITS OWN ENTREPRENEURS—PAGE 4
DATE: JANUARY 23, 2013

Believe in Ohio - Core Team of Proposal Authors and Supporters

- Dr. Julian Earls, Cleveland State University, Executive in Residence; President, Entrepreneurial Engagement Ohio
- Dr. Lynn Elfner, CEO, The Ohio Academy of Science; Acting Editor, *Ohio Journal of Science*
- Dr. Katrina Cornish, Ohio State University - OARDC, Ohio Research Scholar, Bioemergent Materials
- Dr. Brian Davis, Department Chair, Department of Biomedical Engineering, University of Akron
- Mr. Johnathan Holifield, Vice President, Inclusive Competiveness, NorTech
- Mr. Read Wakefield, Director, Morgan Center for Entrepreneurial Studies, Ashland University
- Mr. Pat Valente, Executive Director, Ohio Fuel Cell Coalition
- Ms. Christina Wooley, Curriculum Coordinator, Hudson City Schools
- Ms. Kathy Sfiligoj, Science Department Chair, AP Chemistry Teacher, Hudson City Schools
- Ms. Sue Conroy, AP Biology Teacher, Hudson City Schools
- Ms. Betty Banks-Burke, Business Department Chair, Business & Entrepreneurship Teacher, Hudson City Schools
- Dr. Carla Calevich, Director of Curriculum and Instruction, Brecksville-Broadview Heights City Schools
- Ms. Germaine Polensek, Entrepreneurship & Marketing Teacher, Cuyahoga Valley Career Center and Brecksville-Broadview Heights High School
- Mr. John Klipfell, Executive Director, Entrepreneurial Engagement Ohio

Editor's notes:

The Ohio Academy of Science is the leading organization in Ohio to foster curiosity, discovery, and innovation and to unite all who value education, science, engineering, technology, or their applications for the benefit of society. Founded in 1891, the Academy is a membership based, volunteer-driven, not-for-profit organization. <http://www.ohiosci.org/>

Entrepreneurial Engagement Ohio (EEO) is a 501(c) (3) educational charity formed to promote student and community entrepreneurial, economic, business and scientific literacy. <http://www.eohio.org>

NorTech is a regional nonprofit technology-based economic development organization serving 21 counties in Northeast Ohio. As a catalyst for growing Northeast Ohio's emerging technology industries, NorTech is leading efforts to develop regional innovation clusters that create jobs, attract capital and have a long-term, positive economic impact on the region. www.nortech.org

*STEM is science, technology, engineering, mathematics and medicine. STEM Education is both the **mastery** and **integration** of Science, Technology, Engineering and Mathematics for all PK-12 students. It incorporates scientific inquiry and technological design through student-focused, project-based curricula to develop skills of communication, teamwork/collaboration, creativity/innovation, critical thinking, and problem solving.

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